Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended): Cardiac laser surgery apparatus comprising

a CO_2 slab laser, said slab laser including two narrowly spaced electrodes having opposed planar surfaces and a rectangular discharge region defined between said opposed planar surfaces of said two narrowly spaced electrodes, and

a laser delivery system for delivering laser pulses from said laser to a patient's heart.

2. (Original): The apparatus of claim 1 wherein said laser delivery system includes a hand piece for delivering pulses to the outside of a patient's heart to provide openings in the patient's heart for myocardial revascularization.

3. (Original): The apparatus of claim 1 wherein said pulses are shorter than 100 ms and provide energy of between 8 and 80 Joules per pulse.

4. (Original): The apparatus of claim 1 wherein said laser delivery system is synchronized to the heart beat to fire when the heart is electrically insensitive to reduce the chance of arrhythmia.

5. (Original): The apparatus of claim 4 wherein said laser starts firing on the R wave and stops before the T wave.

6. (Original): A method of cardiac laser surgery comprising operating a CO_2 slab laser to output laser pulses, and delivering said laser pulses to a patient's heart.

7. (Original): The method of claim 6 wherein said delivering provides openings in the patient's heart for myocardial revascularization.

8. (Original): The method of claim 6 wherein said pulses are shorter than 100 ms and provide energy of between 8 and 80 Joules per pulse.

9. (Original): The method of claim 6 wherein said laser delivery system is synchronized to the heart beat to fire when the heart is electrically insensitive to reduce the chance of arrhythmia.

10. (Original): The method of claim 9 wherein said laser starts firing on the R wave and stops before the T wave.

Claims 11-71 (Cancelled)